

# LPS V1 I.T. FUNCTIONAL SCOPE DOCUMENT

**Presented To:** Tom Kroswek

From: John Holbel

Date:

### **Executive Overview**

### **Project Approach:**

LPS was derived from core APS functionality whose requirements included maintenance of parts, packaging, suppliers, route plans, and releases. This core functionality was identified as the necessary requirements to be supplied in the initial productized version of APS, i.e. LPS.

This functional design document is intended to identify AAI requirements to be included in version one of LPS. The project approach was defined such that functionality will be delivered in separate phases to the AAI team over a period of 6 to 9 months. Each phase would have an initial stage and set of tasks to define and complete the detailed business rules, behaviors, and procedures required to automate the functional requirements. The work product from this stage includes use case documentation, which is subsequently used to design and construct the system components for each use case. The use case documentation is defined by the business team and distributed to systems team. The systems team will then enhance the business use case to a systems concrete use case with sequence diagrams and workflow diagrams as appropriate. The use case documentation also serves as baseline for test case development (reference appendix a) The scope of the project includes the following phases:

- Framework This phase is the application foundation required to develop subsequent features and functionality of LPS. This phase basically builds internal system reusable components, security modules, api interface definitions, standards, user interface standards and framework. The majority of this phase is not readily visible to the end user, but rather is the internals of the application.
- User Administration This phase produces the user interfaces and system components to define user access, roles, and privileges. Application and data security is provided in this phase. Definitions of roles, data and functional access priviliges will be defined in use case documentation provided by business team.
- 3 Contact & Organization This phase implements the plants, carriers, suppliers, contacts subsystem.
- 4 Packaging & Container This phase implements the standard part data configurations, container types, and packaging dimensions. The standards will be defined and finalized as part of the use case documentation.
- Routing This phase produces the shipments, loads, routes, stops, and itinerary structures to be used for housing route plans and maintenance of the network designs. Importing and Exporting features will be provided to interface with i2 Modeler, Maxload, and ILPS.
- Desktop Tools Integration This phase will provide the interfaces and processes to be used for exchanging data with ILPS, Maxload, and i2 Tmodeler.
- Releases This phase will provide user interfaces for managing forecasts and releases. Cube calculations will be performed as well and a standard algorithm will be finalized as part of the use case definition.
- 8 Reporting A limited number of standard canned reports will be provided as part of the base LPS system.

### **Scope Statement:**

The scope statement describes the required functionality expected to be implemented within the LPS V1 project.

### 1 Framework

- Application Security components
- User Presentation standards
- Common, reusable API standards
- Units of Measure Support
- Store both metric and English
  - User Profile indicates which unit of measure the user wishes to see and edit in.
  - Currency field will indicate the type of currency for all cost fields. No support for translation either during entry or display.
  - O All time will be stored in local time with another field indicating the time zone.

### 2 User Admin (reference appendix a. for attached use cases)

- Security, Access, Startup, Shutdown
- Role Based priviliges
- User Presentation Layer for Administrators

### 3 Organization and Contacts

### Provide normalized Organization & Contact Information

- Use DCX APS as baseline for database model
  - Organizations, persons, production time, timezones, country, state, maintenance screens
  - o (13 entities as identified in initial data model)

### 4 Packaging & Container

#### Use DCX APS as baseline database model for packaging with some Visteon Tier-1 views

- o Packaging, Containers, Pallets, Equipment Types, Modes maintenance
- o Each entity has maintenance screen
- Cube calculation, sub-calculations, real-time calculations/live-links to container pallets
- o Additional equipment types, drop-decks, for more and more accurate cubing, TA (Truckload Analysis)

### 5 Routing Requirements

### Enhance current APS functionality to support multi-account network wide routing capabilities.

- Part detail, shipments, loads, and route maintenance features will be supported.
- Views from route perspective drilling into loads then into stops and resulting schedules.
- View from shipment/trip to see what loads are involved to complete trip.
- View from particular location stop, origin, destination, crossdock, any point and look at loads...
- Attach to the planned route layer execution details such as window times, drops, pickups
- Provide capability for mixed-account routes and multi-account volumetric analysis
- Support volumetric analysis for weights and cubes over pre-defined time interval over planned routes

### Provide the following Network Route User Interface Views

#### 1. Route View

- Offer selection of route fields to search or filter on
- Show list of routes
- For a given route, offer the option to:
  - See an editable view of the route
  - See its loads (see load view)

### 2. Shipment View

- Offer selection of shipment fields to search or filter on
- Show list of shipments
- For a given shipment, offer the option to:
  - o See an editable view of the shipment
  - See its loads (see load view)
  - See its packages

#### 3. Location View

- Offer selection of locations to search on
- For a given location, show its loads (see load view)

#### 4. Load View

- Show list of loads
- For a given load, offer the option to:
  - See an editable view of the load
  - o See a list of stops
  - See a list of related routes (see route view)
  - o See its schedule

### 5. Stop View

- Show list of stops
- For a given stop, offer the option to:
  - See an editable view of the stop
  - See a list of shipments (see shipment view)
  - See its itinerary

### 6. Explorer View

Show a "flattened" view where each row is a join of route, load, and stop.
 Provide capability to "zoom" into views of the selected route, load, or stop.

### 6 Desktop Tools Integration

- ILPS interface, import and export
- o Maxload interface, import and export
  - TBD features stacking multi-customer parts and complete process defin
  - Snapshot and relating to data at time graphic was generated
  - ODBC I/F.
  - User Screen to Export from LPS to MS-Access
  - Save JPG as external file with pointer in LPS
- o 12 Transportation Modeler interface, import and export

### Predesigned via routing

### 7 Releases

Provide Cross-tabulated view of release quantities covering the time period in EDI 830 and EDI 862.

### 8 Reporting.

- Route Detail (this may end up being several reports)
- TA Sheets
- Shipment
- System Miles
- Avg. Frequency
- Frequency Impact (changes from current to proposed)
- Inventory Impact (changes to daily dollar values)
- New and Obsolete Parts
- New and Obsolete Suppliers

### Roles and Responsibilities:

### **System Team**

- Concrete use cases, sequencing diagrams, and system documentation
- Tested and deployed LPS for two logistics engineers
- Project status reports and meetings
- Support UA Testing

### **Business Team**

- Use Case development, including business rules, standard cubing algorithm, and approval of concrete use cases, sequencing diagrams, and workflow diagrams
- User Acceptance Test Case Development and Execution
- User training documentation
- Assistance with prototyping

# **Project Information**

**Project Business Releases - Timeline** 

**Limitations / Out of Scope** 

**Critical Success Factors** 

**Assumptions** 

Risk / Risk Mitigation Strategy

**Project Budget Cost Model** 

# **Approvals**

Signature Page

Ryder System, Inc.

Name	Title Date	Approval
Tom Kroswek	DBD/DCL	
Tom Knutilla	IT Director	
John Holbel	Project Manager	

### Appendix A – Use Cases

# **User Subscription**

BC: The user presses the New User button. The system opens a User Subscription window. The user types his or her first name, last name, email address, company, phone, fax, and extension. The user chooses their role(s) from the list (Ryder Employee, Ryder Customer, Supplier, or Carrier), their sponsor, and then press the Submit button. The system ensures that the user has provided valid data, sends a subscription request to that role/sponsor super-user, and displays a message box telling the user that they will be emailed a temporary password once their subscription has been approved.

#### AC:

- If the user's name is invalid, the system displays an error message and prompts the user to retype their name.
- If the user's email is invalid, the system displays an error message and prompts the user to retype their email.
- If the user's company is invalid, the system displays an error message and prompts the user to retype their company.
- If the user's phone is invalid, the system displays an error message and prompts the user to retype their phone.
- If the user's fax is invalid, the system displays an error message and prompts the user to retype their fax.
- If the user's role is invalid, the system displays an error message and prompts the user to enter their role.
- If the user's sponsor is invalid, the system displays an error message and prompts the user to retype their sponsor.

# **New User Approval**

BC: The system sends a subscription request to the role/sponsor super-user. The super-user will verify the subscriber's identity, approve the new user, and setup the new users access level. The system will send an email to the new user with logon instructions and a system generated temporary password.

### AC:

• If the subscriber is not approved, the system will send an email to the subscriber and sponsor with detail as to why the subscriber was not approver to be a user.

# **User Logon**

BC: The user types his or her email address and password and then presses the Logon button. The system ensures that the user has provided valid data, searches for the users access level, logs the user on, and opens Arsenal web page based on the users access.

AC:

- If the user's email is invalid, the system displays an error message and prompts the user to retype the email address.
- If the user's password is invalid, the system displays an error message and prompts the user to retype the password.

# **Change Password**

BC: The user presses the Change Password button. The system opens a Password Change window. The user types his or her current password and new password (twice) then presses Save. The system ensures that the user information is valid and displays a message box telling the user the their password has been changed.

AC:

- If the current password does not match the users profile, the system displays an error message and prompts the user to retype their current password.
- If the new password is too short, the system displays an error message and prompts the user to retype their new password (twice).
- If the new password is too long, the system displays an error message and prompts the user to retype their new password (twice).
- If the user did not type the same new password twice, the system displays an error message and prompts the user to retype their new password (twice).

# **Updating User Profile**

BC: The user presses the Edit User Profile button. The system opens a User Profile window. The user makes changes to his or her email address, company, phone, fax, and presses Save. The system ensures that the user information is valid and displays a message box telling the user that their profile has been changed.

AC:

- If the user's email is invalid, the system displays an error message and prompts the user to retype their email.
- If the user's company is invalid, the system displays an error message and prompts the user to retype their company.
- If the user's phone is invalid, the system displays an error message and prompts the user to retype their phone.
- If the user's fax is invalid, the system displays an error message and prompts the user to retype their fax.

### Search

BC: The user chooses one or more search criteria and types in a search string and presses the enter key. The system searches the selected field for the search string and displays the results in the table view.

AC:

- If the search criterion is null, the system does not filter the table view.
- If there are no matching records, the system displays no records in the table view.

### **New Location**

BC: The user verifies that the new location does not already exist. The user presses the New button. The system opens a Location Information window. The user enters the location name, address, city, state, zip, country, lat, lon, time zone, daylight savings time observed, web address, comments, and presses the Save button. The system ensures that the information provided is valid and closes the window and opens the Edit Customer Associations window. (Evoke Edit Customer Associations)

AC:

- If the location already exists during user verification, the user will add a new customer association.
- If the location already exists after the user enters the location information, the system will alert the user that the location already exists, close the Location Information window, and open the Edit Customer Associations window.
- If the location city-state-zip is invalid, the system displays an error message and prompts the user to retype the city-state-zip.
- If the location name, address, city, state, zip, country, time zone, or daylight savings time observed are null, the system displays an error message and prompts the user to retype.

# **Edit Location**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user makes changes to the location fields, and presses the Save button. The system ensures that the information provided is valid and closes the window.

AC:

- If the location city-state-zip is invalid, the system displays an error message and prompts the user to retype the city-state-zip.
- If the location name, address, city, state, zip, country, time zone, or daylight savings time observed are null, the system displays an error message and prompts the user to retype.

### **Delete Location**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Delete button. The system asks the user to confirm delete. The user presses the Yes button. The system removes the record.

AC:

• If the user presses the No button the system makes no changes.

### **Edit Customer Associations**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Customer Associations button. The system opens a Customer Associations window. The user will check the customer that they want to associate the location to. The system will open a supplier code field. The user will enter the appropriate supplier code for the selected customer. The user will repeat this process until all associations needed are complete then the user presses the Save button. The system ensures that the information provided is valid and closes the window.

AC:

- If the supplier code is null for a checked customer, the system displays an error message and prompts the user to type the supplier code.
- If the supplier code does not match the format for the selected customer, the system displays an error message and prompts the user to type the supplier code.
- If an association is unchecked, the system displays an error message and prompts the user to remove the supplier code before continuing.

# **New Contact Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Contact Info button. The system opens a Contact Information window. The user presses the New button. The system creates a blank record and adds two new buttons (Lookup from List and Create New). The user presses the Lookup from List button. The system opens a Contact Lookup screen. The user enters all or part of the last name of the contact that they are looking for. The system searches for the search string and displays the results in the table view. The user presses the hyperlink to the contact that they want to choose. The system closes the window and places the selected records information into the Contact Information Screen. The user enters the contact type, customer, plant, and presses the Save button. The system ensures that the information provided is valid and closes the window. AC:

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- If the contact type is null, the system displays an error message and prompts the user to choose a contact type.
- If the customer is null, the system will use this contact for all customers.
- If the plant is null, the system will use this contact for all plants.
- If the plant is selected and the customer is null, the system displays an error message and prompts the user to choose a customer.
- If the user selects Create New, then Evoke User Subscription.

### **Edit Contact Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Contact Info button. The system opens a Contact Information window. The user edits the contact type, customer, plant, and presses the Save button. The system ensures that the information provided is valid and closes the window.

#### AC:

- If the user presses the My Info button, the system fills in the first name, last name, phone, fax, extension, and email from the users profile.
- If the contact type is null, the system displays an error message and prompts the user to choose a contact type.
- If the customer is null, the system will use this contact for all customers.
- If the plant is null, the system will use this contact for all plants.
- If the plant is selected and the customer is null, the system displays an error message and prompts the user to choose a customer.

# **Delete Contact Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Delete button. The system asks the user to confirm delete. The user presses the Yes button. The system removes the record.

#### AC:

• If the user presses the No button the system makes no changes.

# **New Time Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Time Info button. The system opens a Time Information window. The user presses the New button. The system creates a new record. The user enters the time type, start

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hour, start minute, end hour, end minute, and presses the Save button. The system ensures that the information provided is valid and closes the window.

#### AC:

- If the time type is null, the system displays an error message and prompts the user to choose a time type.
- If the start hour is null, the system displays an error message and prompts the user to enter a start hour.
- If the start minute is null, the system displays an error message and prompts the user to enter a start minute.
- If the end hour is null, the system displays an error message and prompts the user to enter an end hour.
- If the end minute is null, the system displays an error message and prompts the user to enter an end minute.

### **Edit Time Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Time Info button. The system opens a Time Information window. The user edits the time type, start hour, start minute, end hour, end minute, and presses the Save button. The system ensures that the information provided is valid and closes the window.

### AC:

- If the time type is null, the system displays an error message and prompts the user to choose a time type.
- If the start hour is null, the system displays an error message and prompts the user to enter a start hour.
- If the start minute is null, the system displays an error message and prompts the user to enter a start minute.
- If the end hour is null, the system displays an error message and prompts the user to enter an end hour.
- If the end minute is null, the system displays an error message and prompts the user to enter an end minute.

# **Delete Time Information**

BC: The user presses the location hyperlink. The system opens a Location Information window. The user presses the Delete button. The system asks the user to confirm delete. The user presses the Yes button. The system removes the record.

### AC:

• If the user presses the No button the system makes no changes.